



# PEOPLES GAS NORTH SHORE GAS 2018-2021 EVALUATION PLANS

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PRESENTATION TO THE ILLINOIS SAG

December 5, 2017

NAVIGANT

# OBJECTIVES FOR TODAY'S PRESENTATION

## Peoples Gas – North Shore Gas Multi-Year Evaluation Plans for 2018-2021

### 1. Overview of programs being evaluated

- Impact or process?
- What year(s) will the evaluations be completed?

### 2. Methodological approach

- When will AMI (billing usage for natural gas) data be used?

### 3. Coordination with other programs and utilities

### 4. Budget priorities

- General approach for prioritizing resources
- Budget for responding to TRM requests?

### 5. Additional research (e.g. EM&V studies?)

### 6. Q&A and stakeholder feedback

# 2018-2021 PGL & NSG PORTFOLIO OVERVIEW

Program Offerings	Portfolio Net Therm Savings
<b>Income Eligible</b>	<b>14%</b>
Single Family	7%
Multi-Family	7%
<b>Residential</b>	<b>37%</b>
Outreach and Education (Kits and Behavioral)	9%
Single Family (DI and Rebates)	11%
Multi-Family (DI and Comprehensive)	17%
<b>Business Programs</b>	<b>49%</b>
Small Business	7%
C&I Businesses	30%
Public Sector	12%

# 2018-2021 – OVERVIEW OF MULTI-YEAR EVALUATIONS

**The tables that follow are preliminary plans for each evaluation, covering:**

- Process Evaluation Research
- NTG Research
- Gross Impact Evaluation

**In several cases, the table rows show “Evaluated Components” of comprehensive programs when different evaluation approaches are applied to components of a comprehensive market delivery approach**

**First, background on approaches**

## **Process Research**

- In-Depth Scope – Once per four-year planning cycle, timed with NTG
- Limited Scope – Annual review with PM/IC, materials
- Ad-hoc process research

# 2018-2021 – OVERVIEW OF MULTI-YEAR EVALUATIONS

## Net-to-Gross Research

- **Conduct research once per four-year planning cycle**
- **NTG research timing criteria:**
  1. Is the most recent research result valid for deeming?
  2. How many years since the last research?
  3. Program maturity: When is the right time?
  4. How large are the program impacts in the portfolio?
  5. How much variation do we expect?
  6. Joint or not-joint? What are the plans for ComEd and Ameren?
  7. Balance the evaluation effort over the four years
- **Move toward more real-time (RT) and on-line survey research**
- **Include free ridership and spillover in NTG, although research may be done separately**
- **Follow the TRM NTG protocol or notify parties of divergence**
- **No NTG research when billing regression provides net savings**

# 2018-2021 – OVERVIEW OF MULTI-YEAR EVALUATIONS

## Gross Impact Evaluation Overview

- **Estimate verified gross impacts annually on every program**
- **Five main gross impact methodologies:**
  1. TRM-based measure verification
  2. Custom project engineering review and on-site M&V
  3. Billing usage regression analysis
  4. Calibrated simulation (calibrated to billing usage)
  5. Review data and apply previous year's realization rate
- **More real-time research** – impact evaluation during the program year
  - Mid-year evaluation verification of TRM-based measures
  - Conduct one to three waves of custom project verification
- **End-of-Year (EOY) final verification – compressed reporting timeline**
  - Attempt to have at least 75 percent of custom project savings verified during the program year

**Verified Net Savings = Verified Gross x Deemed NTG**

# 2018-2021 – OVERVIEW OF MULTI-YEAR EVALUATIONS

## Use of AMI (billing usage) data

- **Billing Usage Regression Analysis**
  1. Behavioral Programs: Home Energy Reports
  2. Smart Thermostat impact analysis (residential)
  3. Current and potential TRM measure research will be considered, but no studies are planned at this time
- **Calibrated Simulation/Calibrated Engineering Models**
  1. About one in four custom project verifications use billing usage history (for process and difficult to model savings)
  2. Residential New Construction
  3. Whole House Retrofits (potential research topic)
  4. Affordable Housing NC (depends on savings volume)

# 2018-2021 – INCOME ELIGIBLE PROGRAMS

Evaluated Component	Evaluation Activities by Year				
	In-Depth Process Research	NTG Research Timing	NTG Approach	Annual Gross Impact Approach	Gross Impact Timing
Income Eligible Single Family					
DI and Comprehensive Retrofits	2018	None	Deemed 1.0	TRM Based	Mid-YR & EOY
Income Eligible New Construction					
Developer NC	2018	TBD	TBD	Engr. Review	EOY
Income Eligible Multi-Family					
Assessment / DI	2018	TBD	TBD	TRM Based	Mid-YR & EOY
Retrofit Rebates	2018	TBD	TBD	TRM Based	Mid-YR & EOY
Custom Projects	2018	TBD	TBD	Engr. Review	Waves & EOY



# 2018-2021 – RESIDENTIAL PROGRAMS

Evaluated Component	Evaluation Activities by Year				
	In-Depth Process Research	NTG Research Timing	NTG Approach	Annual Gross Impact Approach	Gross Impact Timing
<b>Education and Outreach</b>					
Home Energy Reports	Optional	N/A	N/A	Billing Analysis	EOY
EEE	2019	None	Deem 1.0	TRM Based	Mid-YR & EOY
<b>Single Family Assessments / DI (Home Energy Jumpstart)</b>					
Assessment / DI	2020	2020	Protocol	TRM Based	Mid-YR & EOY
<b>Single Family Rebates</b>					
Equipment Rebates	2020	2020	Protocol	TRM Based	Mid-YR & EOY
Weatherization Rebates	2020	2020	Protocol	TRM Based	Mid-YR & EOY
Advanced Tstat	Optional	None	N/A	TRM Based / Billing Analysis	Mid-YR & EOY / One-time TRM Update 2019
<b>Residential New Construction</b>					
New Construction	2019	2019	Protocol	Engr. Review or Calibrated Simulation	EOY
<b>Multi-Family</b>					
Assessment / DI	2018	2018	Protocol	TRM Based	Mid-YR & EOY
Standard / PTA Rebates	2018	2018	Protocol	TRM Based	Mid-YR & EOY
Custom & Gas Opt.	2018	2018	Protocol	Engr. Review / On-site M&V	Waves & EOY

# 2018-2021 – BUSINESS PROGRAMS

Evaluated Component	Evaluation Activities by Year				
	In-Depth Process Research	NTG Research Timing	NTG Approach	Annual Gross Impact Approach	Gross Impact Timing
<b>Small Business</b>					
Assessment / DI	2020	2020	Protocol	TRM Based	Mid-YR & EOY
Rebates	2020	2020	Protocol	TRM Based	Mid-YR & EOY
Custom	2020	2020	Protocol	Engr. Review	Waves & EOY
<b>Business Assessments and Grants / Rebates</b>					
Assessment / DI	2019	2019	Protocol	TRM Based	Mid-YR & EOY
Prescriptive Rebates	2019	2019	Protocol	TRM Based	Mid-YR & EOY
Custom	2018	2018	Protocol	Engr. Review; On-Site M&V	Large Project Early Review Waves & EOY
Gas Optimization	2021	2021	Protocol	Engr. Review; On-Site M&V	Waves & EOY
Retro-Commissioning	2021	2021	Protocol	Engr. Review; On-Site M&V	Waves & EOY
Joint New Construction	Combine with NTG	2019 and 2021	Protocol	Engr. Review	Waves & EOY
<b>Upstream Prescriptive Rebates</b>					
Upstream	2021	2021	Protocol / TBD	TRM Based	Mid-YR & EOY

# 2018-2021 – PUBLIC SECTOR PROGRAMS

Evaluated Component	Evaluation Activities by Year				
	In-Depth Process Research	NTG Research Timing	NTG Approach	Annual Gross Impact Approach	Gross Impact Timing
Assessments and Grants / Rebates					
Assessment / DI	2019	2019	Protocol	TRM Based	Mid-YR & EOY
Prescriptive Rebates	2019	2019	Protocol	TRM Based	Mid-YR & EOY
Custom	2018 and 2020	2018 and 2020	Protocol	Engr. Review; On-Site M&V	Large Project Early Review Waves & EOY
Gas Optimization	2021	2021	Protocol	Engr. Review; On-Site M&V	Waves & EOY
Retro-Commissioning	2021	2021	Protocol	Engr. Review; On-Site M&V	Waves & EOY
Joint New Construction	Combine with NTG	2019 and 2021	Protocol	Engr. Review	Waves & EOY
Public Housing Authority					
PHA	2018	TBD	TBD	TRM Based / Engr. Review	Mid-YR, Waves, & EOY

# COORDINATION ACROSS UTILITIES

- **Navigant coordinates with the other utilities, today, on an ongoing basis - this includes Ameren, ComEd and Nicor Gas**
- **Coordination beyond specific programs occurs as follows:**
  - SAG meetings on specific topics and issue management
  - Via e-mail on Illinois-wide key issues or issues that are program specific and may impact multiple utility programs
  - Illinois NTG Framework – updating the framework is an ongoing discussion
  - Illinois TRM Technical Advisory Committee
  - Coordination calls (schedule monthly)
- **Gas/Electric Joint Program Evaluations (with ComEd evaluation team)**
  - Some evaluations will be done jointly (BNC, RCx, etc.)
  - Joint programs can be evaluated separately in some cases
- **Support Coordination on Research Studies**
  - Smart Thermostat billing analysis (residential)
  - TRM measure research will be considered

# 2018-2021 – BUDGET PRIORITIES

## Prioritizing Resources

- Meet Requirements for Savings Verification and Reporting
- Program Contribution to Portfolio Net Savings
- Program Spending within Portfolio
- Program Maturity
- Program/Implementer Needs and Effectiveness
- SAG Input and ICC Orders
- High Impact Measures
- Savings Uncertainty

## Budget for TRM Requests

- Annual allocation for participation in TRM TAC & workpaper review

## Additional Research

- Participate in an updated residential Smart Thermostat billing analysis
- TRM measure research will be considered
- Other topics will be considered
- Budgets comparable to GPY4-6
- Can we leverage joint studies?

# CONTACTS

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